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C4  
16. (Thrice Amended) A method of preparing an antimicrobial protein, said method comprising;

- a) identifying in a known sequence or designing an amino acid sequence which forms a helix-turn-helix structure;
- b) substituting individual residues in said amino acid sequence to achieve a sequence having the same distribution of positively charged residues and cysteine residues as the distribution found in a protein having a sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:3 and SEQ ID NO:5;
- c) synthesizing chemically or expressing by recombinant DNA techniques in liquid culture an antimicrobial protein comprising said substituted amino acid sequence; and
- d) isolating said antimicrobial protein.

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17. (Amended) The protein fragment of Claim 1, wherein said protein fragment is a polypeptide containing a relative cysteine and tyrosine or phenylalanine spacing of Z-2X-C-3X-C-(10-12)X-C-3X-C-3X-Z (SEQ ID NOS 34-36) wherein X is any amino acid residue, and C is cysteine, and Z is tyrosine or phenylalanine.

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20. (Amended) The protein fragment of Claim 1 which is truncated, wherein said truncated protein fragment retains the antimicrobial activity of the nontruncated protein fragment.

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34. (Amended) A method of inhibiting microbial infestation of a plant, the method comprising; treating said plant with an effective amount of the composition according to claim 11 for a period sufficient to inhibit microbial infestation of the plant.

**Please add the following claim**

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42. The method of Claim 16 further comprising testing the antimicrobial protein for antimicrobial activity.

**REMARKS**

The claims have been amended to more precisely claim the invention. Claim 16 has been amended to remove the phrase "using a computer modeling program" in response to the rejection under 35 U.S.C. §112. Claims 1, 3, 13, 16-17, 20, and 34 have been amended. Claim 42 has been added. Support for amended Claim 16 can be found in the Specification at page 10, line 4 to page 11, line 12, where detail is given of how a protein having the desired distribution of cysteine and positively charged residues could be prepared. It is implicit in this detail that the